



GETTLER-RYAN INC.

TRANSMITTAL

January 17, 2001

G-R #: 180233

TO: Mr. David B. De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

CC: Mr. Douglas Lee
Gettler-Ryan, Inc.
Dublin, California

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: Tosco (76) SS #0018
6201 Claremont Boulevard
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	December 14, 2000	Groundwater Monitoring and Sampling Report Fourth Quarter - Event of November 16, 2000

COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by *January 30, 2001*, this report will be distributed to the following:

cc: Mr. Don Huang, Alameda County Health Care Service Division, 1131 Harbor Bay Pkwy., Ste. 250, Alameda, CA 94501

ENCLOSURE
00 JAN 31 PM 2:59
trans0018.dbg



GETTLER - RYAN Inc.

December 14, 2000
G-R Job #180264

Mr. David B. De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

RE: Fourth Quarter 2000 Groundwater Monitoring & Sampling Report
Tosco (76) Service Station #0018
6201 Claremont Boulevard
Oakland, California

Dear Mr. De Witt:

This report documents the groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On November 16, 2000, field personnel monitored and sampled three wells (MW-1 through MW-3) at the above referenced site.

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in the wells. Static water level data and groundwater elevations are summarized in Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Tables 1 and 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

Deanna L. Harding
Project Coordinator

Stephen J. Carter
Senior Geologist, R.G. No. 5577

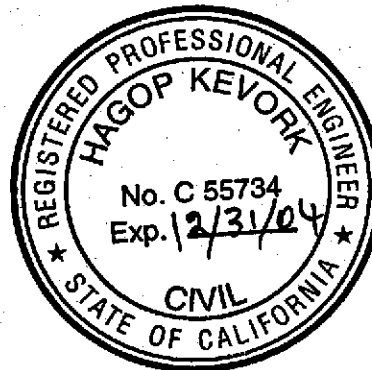
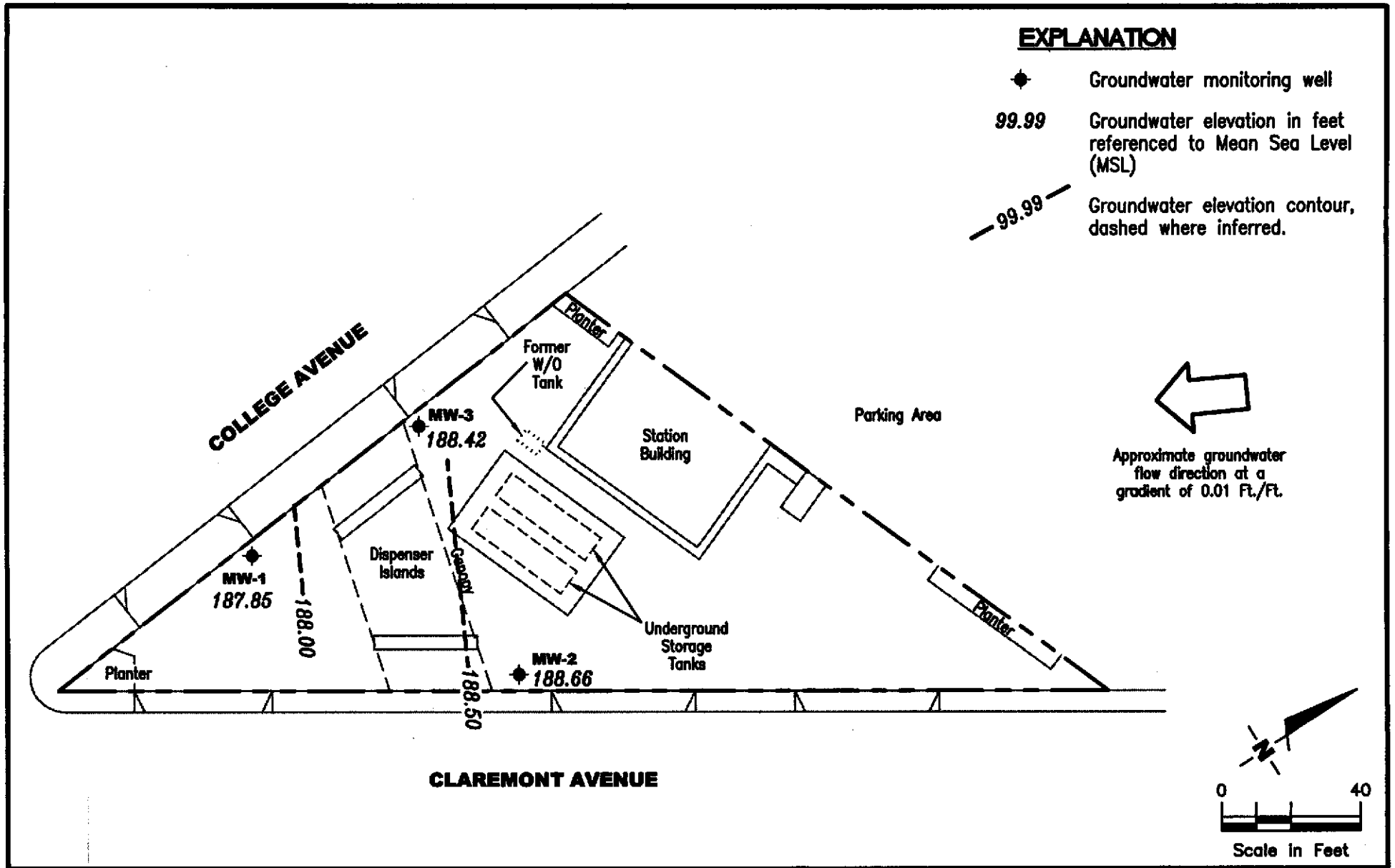


Figure 1: Potentiometric Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Groundwater Analytical Results - Oxygenate Compounds
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

0018-qml



Gettler - Ryan Inc.

6747 Sierra Ct., Suite J
Dublin, CA 94568 (925) 551-7555

POTENTIOMETRIC MAP
Tosco (76) Service Station #0018
6201 Claremont Avenue
Oakland, California

FIGURE

1

PROJECT NUMBER
180264

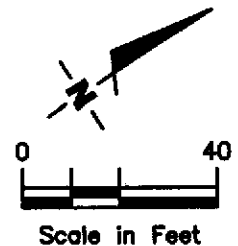
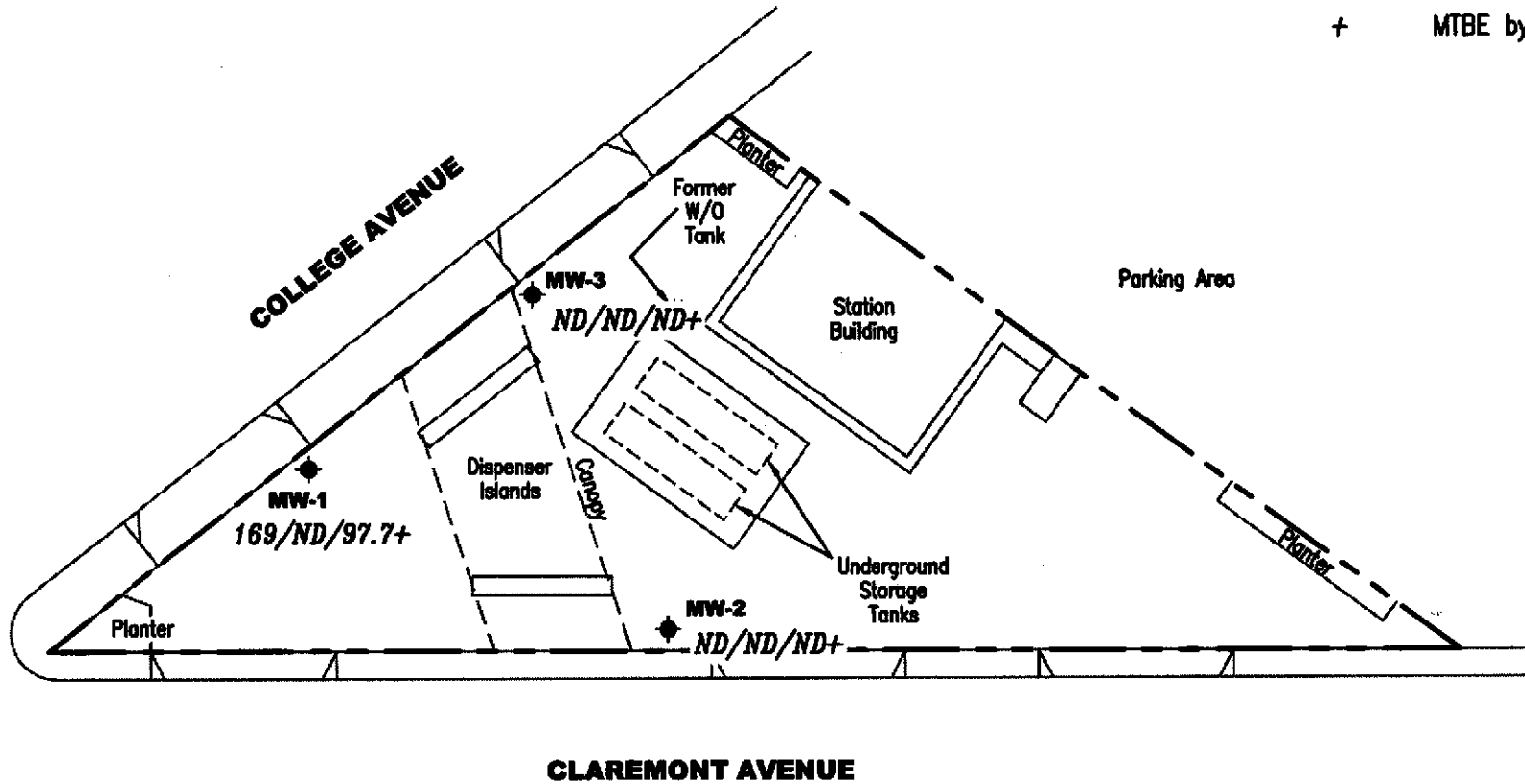
REVIEWED BY

DATE
November 16, 2000

REVISED DATE

EXPLANATION

- ◆ Groundwater monitoring well
- A/B/C TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/ Benzene/MTBE concentrations in ppb
- + MTBE by EPA Method 8260



Gttler - Ryan Inc.

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CONCENTRATION MAP
Tosco (76) Service Station #0018
6201 Claremont Avenue
Oakland, California

FIGURE
2

PROJECT NUMBER
180264

REVIEWED BY

DATE
November 16, 2000

REVISED DATE

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (76) Service Station #0018
 6201 Claremont Boulevard
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.L. (ft. bgs)	GWE (mst)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1										
208.15	08/24/00	18.55	10.0-30.0	189.60	120 ¹	0.67	ND	0.86	1.4	54/54 ²
	11/16/00	20.30		187.85	169 ³	ND	1.20	1.74	0.629	68.6/97.7 ²
MW-2										
210.27	08/24/00	19.69	10.0-30.0	190.58	ND	ND	ND	ND	ND	ND/ND ²
	11/16/00	21.61		188.66	ND	ND	ND	ND	ND	ND/ND ²
MW-3										
208.98	08/24/00	18.68	10.0-30.0	190.30	ND	ND	ND	ND	ND	4.7/2.3 ²
	11/16/00	20.56		188.42	ND	ND	ND	ND	ND	ND/ND ²
Trip Blank										
TB-LB	08/24/00	--	--	--	ND	ND	ND	ND	ND	ND
	11/16/00	--	--	--	ND	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (76) Service Station #0018
6201 Claremont Boulevard
Oakland, California

EXPLANATIONS:

TOC = Top of Casing

DTW = Depth to Water

(ft.) = Feet

S.I. = Screen Interval

(ft. bgs) = Feet Below Ground Surface

GWE = Groundwater Elevation

(msl) = Mean seal level

TPH(G) = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl tertiary butyl ether

(ppb) = Parts per billion

ND = Not Detected

-- = Not Measured/Not Analyzed

* TOC elevations have been surveyed relative to Mean Sea Level (msl), per the city of Oakland benchmark; a cut square in the top of curb, at the curb return at the northeast corner of College Avenue and Miles Avenue. The station and offset data are relative to the existing building face. Measurements taken at approximate north side of top of box and top of casing. Benchmark elevation = 179.075 feet, msl.

¹ Laboratory report indicates gasoline C6-C12.

² MTBE by EPA Method 8260.

³ Laboratory report indicates unidentified hydrocarbons C6-C12.

Table 2
Groundwater Analytical Results - Oxygenate Compounds
 Tosco (76) Service Station #0018
 6201 Claremont Boulevard
 Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)
MW-1	08/24/00	ND	ND	54	ND	ND	ND
	11/16/00	ND	ND	97.7	ND	ND	ND
MW-2	08/24/00	ND	ND	ND	ND	ND	ND
	11/16/00	ND	ND	ND	ND	ND	ND
MW-3	08/24/00	ND	ND	2.3	ND	ND	ND
	11/16/00	ND	ND	ND	ND	ND	ND

EXPLANATIONS:

TBA = Tertiary butyl alcohol
 MTBE = Methyl tertiary butyl ether
 DIPE = Di-isopropyl ether
 ETBE = Ethyl tertiary butyl ether
 TAME = Tertiary amyl methyl ether
 (ppb) = Parts per billion
 ND = Not Detected

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, temperature, pH and electrical conductivity are measured. If purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. The measurements are taken a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Tosco Marketing Company, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/ Facility # 0018 Job#: 180264
 Address: 6201 Clement Blvd. Date: 11-16-00
 City: Oakland, CA. Sampler: Joe

Well ID MW-1 Well Condition: O.K.
 Well Diameter 2 in Hydrocarbon Thickness: 0 in Amount Bailed (product/water): 0 (gal)
 Total Depth 30.00 ft
 Depth to Water 20.30 ft

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

9.7 x VF 0.17 = 1.65 x 3 (case volume) = Estimated Purge Volume: 5 (gal)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 2:05 Weather Conditions: clear
 Sampling Time: 2:30pm Water Color: none Odor: none
 Purging Flow Rate: 0.1 gpm Sediment Description: none
 Did well de-water? _____ If yes, Time: _____ Volume: _____ (gal)

Time	Volume (gal)	pH	Conductivity $\mu\text{mhos/cm} \times 10^3$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>2:15</u>	<u>1.5</u>	<u>7.97</u>	<u>8.57</u>	<u>64.1</u>			
<u>2:17</u>	<u>3</u>	<u>7.42</u>	<u>9.13</u>	<u>64.2</u>			
<u>2:20</u>	<u>5</u>	<u>7.35</u>	<u>9.14</u>	<u>64.3</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3V0A</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHC, BTEX, MTBC</u>
	<u>2V0A</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>(6) oxy's 478260</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/ Facility # 0018 Job#: 180264
 Address: 6201 Claremont Blvd. Date: 11-16-00
 City: Oakland, CA Sampler: Joe

Well ID MW-2 Well Condition: O.K.
 Well Diameter 2 in Hydrocarbon Thickness: 0 in Amount Bailed (product/water): 0 (gal)
 Total Depth 30.00 ft
 Depth to Water 21.61 ft

Volume Factor (VF)	1" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

8.39 x VF 0.17 = 1.43 x 3 (case volume) = Estimated Purge Volume: 4.5 (gal)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 12:45 Weather Conditions: clear
 Sampling Time: 1:20 A.M. Water Color: none Odor: none
 Purging Flow Rate: 2.5 gpm Sediment Description: none
 Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal)

Time	Volume (gal)	pH	Conductivity $\mu\text{mhos/cm}^\circ$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1:00</u>	<u>1.5</u>	<u>7.46</u>	<u>11.22</u>	<u>65.0</u>			
<u>1:03</u>	<u>3</u>	<u>7.56</u>	<u>11.35</u>	<u>64.7</u>			
<u>1:07</u>	<u>4.5</u>	<u>7.55</u>	<u>11.42</u>	<u>64.6</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>3V0A</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPH, BTEX, MTBE</u>
	<u>2V0A</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>(6) oxy's by 8260</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/Facility # 0018 Job#: 180264
 Address: 6201 Claremont Blvd. Date: 11-16-00
 City: Oakland, CA. Sampler: Joe

Well ID MW-3 Well Condition: O.K.
 Well Diameter 2 in Hydrocarbon Thickness: 0 in Amount Bailed (product/water): 0 (gal.)
 Total Depth 30.00 +
 Depth to Water 20.56 +

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

9.44 x VF 0.17 = 1.60 x 3 (case volume) = Estimated Purge Volume: 5 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 1:30 Weather Conditions: clear
 Sampling Time: 1:54 AM Water Color: none Odor: none
 Purging Flow Rate: _____ gpm Sediment Description: none
 Did well de-water? _____ If yes, Time: _____ Volume: _____ (gal.)

Time	Volume (gal)	pH	Conductivity (umhos/cm @ 25°C)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1:37</u>	<u>1.5</u>	<u>7.85</u>	<u>10.63</u>	<u>65.0</u>			
<u>1:40</u>	<u>3</u>	<u>7.39</u>	<u>10.65</u>	<u>65.1</u>			
<u>1:44</u>	<u>5</u>	<u>7.47</u>	<u>10.60</u>	<u>65.7</u>			

LABORATORY INFORMATION

SAMPLE ID	(?) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3V0A</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHG, BTEX, MTBC</u>
	<u>2V0A</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>(6) oxy's by 8260</u>

COMMENTS: _____



**Sequoia
Analytical**

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612
www.sequoialabs.com

RECEIVED

November 30, 2000

SEQUOIA ANALYTICAL INC.
ANALYTICAL CONTRACTORS

Deanna Harding
Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin, CA 94568

RE: Tosco(4)/L011179

Dear Deanna Harding:

Enclosed are the results of analyses for sample(s) received by the laboratory on November 16, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Richard Lee
for

Latonya Pelt
Project Manager

CA ELAP Certificate Number I-2360





Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin, CA 94568

Project: Tosco(4)
Project Number: TOSCO #0018/ 6201 CLAREMONT BLVD., ORLANDO, FL 32837
Project Manager: Deanna Harding

Sampled: 11/16/00
Analyzed: 11/16/00
Reported: 11/30/00

ANALYTICAL REPORT FOR L011179

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
TB-LB	L011179-01	Water	11/16/00
MW-1	L011179-02	Water	11/16/00
MW-2	L011179-03	Water	11/16/00
MW-3	L011179-04	Water	11/16/00



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Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: TOSCO #0018/ 6201 CLAREMONT BLVD., ORKLAND Project Manager: Deanna Harding	Sampled: 11/16/00 Received: 11/16/00 Reported: 11/30/00
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Sample Description: **TB-LB**
Laboratory Sample Number: **L011179-01**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	0110120	11/27/00	11/28/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	70.0-130		94.7	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: TOSCO #0018/ 6201 CLAREMONT BLVD., ORLANDO Project Manager: Deanna Harding	Sampled: 11/16/00 Analyzed: 11/16/00 Reported: 11/30/00
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Sample Description: MW-1
Laboratory Sample Number: L011179-02

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	0110126	11/28/00	11/28/00		50.0	169	ug/l	1
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	1.20	"	
Ethylbenzene	"	"	"		0.500	1.74	"	
Xylenes (total)	"	"	"		0.500	0.629	"	
Methyl tert-butyl ether	"	"	"		5.00	68.6	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	70.0-130		99.5	%	
Volatile Organic Oxygenated Compounds by EPA Method 8260B								
Ethanol	0110100	11/20/00	11/20/00		1000	ND	ug/l	
Tert-butyl alcohol	"	"	"		100	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	97.7	"	
Di-isopropyl ether	"	"	"		2.00	ND	"	
Ethyl tert-butyl ether	"	"	"		2.00	ND	"	
Tert-amyl methyl ether	"	"	"		2.00	ND	"	
Surrogate: <i>1,2</i> -Dichloroethane- <i>d4</i>	"	"	"	76.0-114		96.2	%	





Sequoia Analytical

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Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: TOSCO #0018/ 6201 CLAREMONT BLVD., ORLANDO, FL 32817 Project Manager: Deanna Harding	Sampled: 11/16/00 Analyzed: 11/16/00 Reported: 11/30/00
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Sample Description: MW-2
Laboratory Sample Number: L011179-03

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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Sequoia Analytical - San Carlos

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Purgeable Hydrocarbons as Gasoline	0110126	11/28/00	11/28/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		72.5	%	

Volatile Organic Oxygenated Compounds by EPA Method 8260B

Ethanol	0110100	11/20/00	11/20/00		1000	ND	ug/l	
Tert-butyl alcohol	"	"	"		100	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	ND	"	
Di-isopropyl ether	"	"	"		2.00	ND	"	
Ethyl tert-butyl ether	"	"	"		2.00	ND	"	
Tert-amyl methyl ether	"	"	"		2.00	ND	"	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	76.0-114		96.2	%	





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Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: TOSCO #0018/ 6201 CLAREMONT BLVD., ORCA Project Manager: Deanna Harding	Sampled: 11/16/00 ORCA #0018 Reported: 11/30/00
---	---	---

Sample Description: MW-3
 Laboratory Sample Number: L011179-04

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	0110126	11/28/00	11/28/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		89.5	%	
Volatile Organic Oxygenated Compounds by EPA Method 8260B								
Ethanol	0110100	11/20/00	11/20/00		1000	ND	ug/l	
Tert-butyl alcohol	"	"	"		100	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	ND	"	
Di-isopropyl ether	"	"	"		2.00	ND	"	
Ethyl tert-butyl ether	"	"	"		2.00	ND	"	
Tert-amyl methyl ether	"	"	"		2.00	ND	"	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	76.0-114		95.4	%	



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: TOSCO #0018/ 6201 CLAREMONT BLVD., ORLANDO, FL 32837 Project Manager: Deanna Harding	Sampled: 11/16/00 Analyzed: 11/16/00 Reported: 11/30/00
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Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUMINOUS Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
---------	---------------	-------------	---------------	-----------	-------	-------------------------------	----------	-----------	-------	--------

Batch: 0110120	Date Prepared: 11/27/00	Extraction Method: EPA 5030B [P/T]								
Blank	0110120-BLK1									
Purgeable Hydrocarbons as Gasoline	11/27/00			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	5.00				
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		8.61	"	70.0-130	86.1			

LCS	0110120-BS1									
Benzene	11/27/00	10.0		8.67	ug/l	70.0-130	86.7			
Toluene	"	10.0		8.16	"	70.0-130	81.6			
Ethylbenzene	"	10.0		8.35	"	70.0-130	83.5			
Xylenes (total)	"	30.0		24.9	"	70.0-130	83.0			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		9.59	"	70.0-130	95.9			

LCS	0110120-BS2									
Purgeable Hydrocarbons as Gasoline	11/27/00	250		229	ug/l	70.0-130	91.6			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		7.67	"	70.0-130	76.7			

Matrix Spike	0110120-MS1	L011198-04								
Purgeable Hydrocarbons as Gasoline	11/27/00	250	ND	215	ug/l	60.0-140	86.0			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		7.85	"	70.0-130	78.5			

Matrix Spike Dup	0110120-MSD1	L011198-04								
Purgeable Hydrocarbons as Gasoline	11/27/00	250	ND	237	ug/l	60.0-140	94.8	25.0	9.73	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		8.45	"	70.0-130	84.5			

Batch: 0110126	Date Prepared: 11/28/00	Extraction Method: EPA 5030B [P/T]								
Blank	0110126-BLK1									
Purgeable Hydrocarbons as Gasoline	11/28/00			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	5.00				
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	10.0		7.26	"	70.0-130	72.6			

LCS	0110126-BS1									
Benzene	11/28/00	10.0		10.3	ug/l	70.0-130	103			
Toluene	"	10.0		9.71	"	70.0-130	97.1			





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: TOSCO #0018/ 6201 CLAREMONT BLVD., ORCA Project Manager: Deanna Harding	Sampled: 11/16/00 Received: 11/16/00 Reported: 11/30/00
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUP1/Quality Control
Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
LCS (continued)										
	0110126-BS1									
Ethylbenzene	11/28/00	10.0		9.84	ug/l	70.0-130	98.4			
Xylenes (total)	"	30.0		29.5	"	70.0-130	98.3			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		7.39	"	70.0-130	73.9			
LCS										
	0110126-BS2									
Purgeable Hydrocarbons as Gasoline	11/28/00	250		232	ug/l	70.0-130	92.8			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		7.81	"	70.0-130	78.1			
Matrix Spike										
	0110126-MS1		L011179-03							
Benzene	11/29/00	10.0	ND	9.32	ug/l	60.0-140	93.2			
Toluene	"	10.0	ND	8.67	"	60.0-140	86.7			
Ethylbenzene	"	10.0	ND	9.06	"	60.0-140	90.6			
Xylenes (total)	"	30.0	ND	27.4	"	60.0-140	91.3			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		8.83	"	70.0-130	88.3			
Matrix Spike Dup										
	0110126-MSD1		L011179-03							
Benzene	11/29/00	10.0	ND	9.50	ug/l	60.0-140	95.0	25.0	1.91	
Toluene	"	10.0	ND	8.78	"	60.0-140	87.8	25.0	1.26	
Ethylbenzene	"	10.0	ND	9.21	"	60.0-140	92.1	25.0	1.64	
Xylenes (total)	"	30.0	ND	27.8	"	60.0-140	92.7	25.0	1.52	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.42	"	70.0-130	94.2			



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: TOSCO #0018/ 6201 CLAREMONT BLVD., ORK Project Manager: Deanna Harding	Sampled: 11/16/00 Analyzed: 11/16/00 Reported: 11/30/00
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Volatile Organic Oxygenated Compounds by EPA Method 8260B/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
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Batch: 0110100	Date Prepared: 11/20/00	Extraction Method: EPA 5030B [P/T]								
Blank	0110100-BLK1									
Ethanol	11/20/00			ND	ug/l	1000				
Tert-butyl alcohol	"			ND	"	100				
Methyl tert-butyl ether	"			ND	"	2.00				
Di-isopropyl ether	"			ND	"	2.00				
Ethyl tert-butyl ether	"			ND	"	2.00				
Tert-amyl methyl ether	"			ND	"	2.00				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	50.0		47.1	"	76.0-114	94.2			

Blank	0110100-BLK2									
Ethanol	11/20/00			ND	ug/l	1000				
Tert-butyl alcohol	"			ND	"	100				
Methyl tert-butyl ether	"			ND	"	2.00				
Di-isopropyl ether	"			ND	"	2.00				
Ethyl tert-butyl ether	"			ND	"	2.00				
Tert-amyl methyl ether	"			ND	"	2.00				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	50.0		46.6	"	76.0-114	93.2			

Blank	0110100-BLK3									
Ethanol	11/22/00			ND	ug/l	1000				
Tert-butyl alcohol	"			ND	"	100				
Methyl tert-butyl ether	"			ND	"	2.00				
Di-isopropyl ether	"			ND	"	2.00				
Ethyl tert-butyl ether	"			ND	"	2.00				
Tert-amyl methyl ether	"			ND	"	2.00				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	50.0		49.0	"	76.0-114	98.0			

LCS	0110100-BS1									
Methyl tert-butyl ether	11/20/00	50.0		49.7	ug/l	70.0-130	99.4			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	50.0		48.5	"	76.0-114	97.0			

LCS	0110100-BS2									
Methyl tert-butyl ether	11/20/00	50.0		45.3	ug/l	70.0-130	90.6			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	50.0		47.8	"	76.0-114	95.6			

LCS	0110100-BS3									
Methyl tert-butyl ether	11/22/00	50.0		47.4	ug/l	70.0-130	94.8			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	50.0		50.4	"	76.0-114	101			

Matrix Spike	0110100-MS1	L011175-03								
Methyl tert-butyl ether	11/20/00	50.0	ND	49.9	ug/l	60.0-140	99.8			





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: TOSCO #0018/ 6201 CLAREMONT BLVD., ORKLEA Project Manager: Deanna Harding	Sampled: 11/16/00 Received: 11/16/00 Reported: 11/30/00
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Volatile Organic Oxygenated Compounds by EPA Method 8260B/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike (continued)	0110100-MS1	L011175-03								
Surrogate: 1,2-Dichloroethane-d4	11/20/00	50.0		51.4	ug/l	76.0-114	103			
Matrix Spike Dup	0110100-MSD1	L011175-03								
Methyl tert-butyl ether	11/20/00	50.0	ND	45.7	ug/l	60.0-140	91.4	25.0	8.79	
Surrogate: 1,2-Dichloroethane-d4	"	50.0		47.7	"	76.0-114	95.4			





Getler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin, CA 94568

Project: Tosco(4)
Project Number: TOSCO #0018/ 6201 CLAREMONT BLVD., ORLANDO, FL 32825
Project Manager: Deanna Harding

Sampled: 11/16/00
Analyzed: 11/16/00
Reported: 11/30/00

Notes and Definitions

#	Note
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1	Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
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DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

Recov. Recovery

RPD Relative Percent Difference

